



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,446	12/15/2003	Harry Schilling	5858-01800	3081
35617	7590	05/23/2007		
DAFFER MCDANIEL LLP P.O. BOX 684908 AUSTIN, TX 78768			EXAMINER WANG, QUAN ZHEN	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 05/23/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/736,446

Applicant(s)

SCHILLING, HARRY

Examiner

Quan-Zhen Wang

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 12 recites the newly added limitation of "the desired value is set by a setpoint device". However, the newly added limitation was not supported by the specification as it was originally filed.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 recites the newly added limitation of "the desired value is set by a setpoint device". However, it is unclear what "setpoint device" means, since the specification does not clearly describe what is the "setpoint device".

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9-12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guempelein et al. (U.S. Patent US 5,535,033) in view of Kadous et al. (U.S. Patent Application Publication US 2003/0095508 A1).

Regarding claims 9, 10, and 16, Guempelein discloses a device (fig. 1) for broadband transmission of digital optical signals between at least one first unit and at least one second unit (fig. 1, combination of elements 10, 11, and 12) traveling relative to the first unit (fig. 1, combination of elements 4, 5, and 6) along a given track (column 2, lines 17-53), the device comprising, in association with the first unit: a data source (fig. 1, data source 6) for generating a serial data stream; an optical transmitter (fig. 1, transmitter 4) for generating optical signals from the serial data stream of the data source; an optical waveguide (fig. 1, fiber 2) for guiding the optical signals generated by the optical transmitter; and also comprising, in association with the second unit: a coupling element (fig. 1, device couple signal to detector) for tapping optical signals from the optical waveguide; an optical receiver (fig. 1, detector 10) for receiving the signals tapped by the coupling element; a data sink (fig. 1, data receiver 12) for further processing the signals received by the optical receiver. Guempelein only differs from the claimed invention in that Guempelein does not specifically disclose an evaluation

Art Unit: 2613

means comprising a micro controller and memory coupled to the receiver for measuring a value corresponding to an operating characteristic of a transmission path between the transmitter and receiver; and a controller coupled to the data source for receiving the value from the micro controller, and to modify the data rate depending on whether the value differs from a desired value. However, it is well known in the art that an optical transmission system inherently comprising controlling means. For example, Kadous of the same filed of endeavor discloses that an optical communication system comprising an evaluation means comprising a micro controller (fig. 3, controller 370) and memory (fig. 3, memory 372) coupled to the receiver for measuring a value corresponding to an operating characteristic of a transmission path between the transmitter and receiver (for example, SNR); and a controller (fig. 3, combination of controller 330 and Tx Data 310) coupled to the data source for receiving the value from the micro controller, and to modify the data rate depending on whether the value differs from a desired value (paragraphs 0088-0096). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the controlling means, as it is disclosed by Kadoud, in the system of Guempelein in order to configure the system to maximize the data rate that may be reliably transmitted over the transmission medium between the data source and data receiver.

Regarding claim 11, Kadous further discloses that the controller comprises means for storing data and for controlling the stored data to be transmitted at different data rates by the transmitter (paragraphs 0088-0096).

Regarding claim 12, as it is understood in view of the above 112 problems, Kadous further discloses that the desired value is set according to the actually prevailing transmission characteristics (Kadous: SNR) of the data path between the optical transmitter and the optical receiver.

Regarding claim 14, Kadous further discloses that the micro controller (paragraphs 0113 and 0131) is provided for control and diagnosis of the device (measuring the SNR).

Regarding claim 15, the modified system of Guempelein and Kadous differs from the claimed invention in that Guempelein and Kadous do not specifically disclose that the device is self-learning and during operation dynamically adapts to currently prevailing operating conditions. However, the instant specification does not clearly disclose how the system is self-learning. In addition, Guempelein further teaches that the system is to provide a contactless data transmission device which permits data to be transmitted between system components which are movable relative to each other, in a manner which achieves a continuous data connection, and which is constructed in a simple way and which is immune from interference. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to configure the device of Guempelein and Kadous to be self-learning and during operation dynamically adapts to currently prevailing operating conditions in order to ensure a continuous data connection and immune from interference.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guempelein et al. (U.S. Patent US 5,535,033) in view of Kadous et al. (U.S. Patent

Art Unit: 2613

Application Publication US 2003/0095508 A1) and further in view of Landis (U.S. Patent US 5,659,368).

Regarding claim 13, the modified system of Guempelein and Kadous differs from the claimed invention in that Guempelein and Kadous do not specifically disclose that an evaluation means is provided between the optical receiver and the data sink; the evaluation means has additional means for signaling incorrectly transmitted data to the controller by means of an auxiliary transmission channel; and the controller is adapted to repeat a transmission of incorrectly received data packages upon request by the evaluation means. However, it is well known in the art to use an evaluation means check the reception of the data and request a retransmission of incorrectly received data packages. For example, Landis discloses to use an evaluation means check the reception of the data and request a retransmission of incorrectly received data packages (column 4, lines 55-63). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate an evaluation means check the reception of the data and request a retransmission of incorrectly received data packages, as it is disclosed by Landis, in the modified system of Guempelein and Kadous in order to ensure a continuous data connection and immune from interference.

### ***Response to Arguments***

8. Applicant's other arguments filed on May 14, 2007 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Glen et al. (U.S. Patent US 6,208,784 B1) discloses a fiber optical multiple access system wherein the information can be accessed using a slidably mounted optical tap at different position of the hollow waveguide. Harrison et al. (U.S. Patent US 6,396,613 B1) disclose an optical high speed communications for a computed tomography X-ray machine to reliably transmit high data rate data. Lohr et al. (U.S. Patent US 6,650,843 B1) disclose a device for providing optical signal

Art Unit: 2613


transmission between a transmitter unit and a receiving unit which is mobile relative to the transmitter unit.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

qzw  
5/21/2007

  
JASON CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800